IN THE CLAIMS:

Please amend the claims as follows.

1. (Canceled)

2. (Currently Amended) ~~A method according to claim 1, further~~ A run length limited code generation method, comprising:

generating ~~the~~ a plurality of different code sequences, which have recording densities that gradually become higher, and which are to be recorded on a plurality of successive subfields on a test data field of an information storage medium; and

generating the plurality of different code sequences on the basis of a plurality of different run length limitations which gradually decrease a minimum run length of identical codes.

3. (Currently Amended) ~~A method according to claim 1,~~ A run length limited code generation method, comprising:

~~wherein the run length limited code generation method is a method of~~ generating a plurality of different code sequences, which have recording densities that gradually become higher, and which are to be recorded on a plurality of successive subfields on a test data field of an information storage medium, including generating a (d, k) run length limited code sequence which meets a condition that a minimum run length of identical codes is (d+1), and a maximum run length of identical codes is ~~(k+1), and~~ (k+1);

~~the method further comprises:~~

~~under the condition d1 > d2 > ··· > dL,~~

generating a (d1, k1) run length limited code sequence to be recorded on a first subfield of the information storage medium;

generating a (d2, k2) run length limited code sequence to be recorded on a second subfield of the information storage medium; and

generating a (dL, kL) run length limited code sequence to be recorded on an L-th subfield of the information storage ~~medium~~ medium;

wherein $d1 > d2 > \cdots > dL$.

4. (Currently Amended) ~~A method according to claim 1,~~ A run length limited code generation method, comprising:

generating a plurality of different code sequences, which have recording densities that gradually become higher, and which are to be recorded on a plurality of successive subfields on a test data field of an information storage medium; and

~~further comprising:~~

under the condition $P1 \leq P2 \leq \cdots \leq PL$ and $P1 < PL$, generating a run length limited code sequence that includes a minimum run length pattern with ~~a~~ an occurrence frequency P1 ~~of occurrence~~, a run length limited code sequence that includes a minimum run length pattern with ~~a~~ an occurrence frequency P2 ~~of occurrence~~, and a run length limited code sequence that includes a minimum run length pattern with ~~a~~ an occurrence frequency PL ~~of occurrence~~.

5. (Canceled)

6. (Currently Amended) ~~An apparatus according to claim 5,~~ A run length limited code recording/reproduction apparatus for generating, recording, and reproducing a run length limited code sequence, comprising:

a generation unit for generating a plurality of different code sequences which have recording densities that gradually become higher; and

a recording unit for recording the plurality of different code sequences generated by the generation unit on a plurality of successive subfields in a test data field of an information storage medium;

wherein the generation unit generates the plurality of different code sequences on the basis of a plurality of different run length limitations which gradually decrease a minimum run length of identical codes.

7. (Currently Amended) ~~An apparatus according to claim 5,~~ A run length limited code recording/reproduction apparatus for generating, recording, and reproducing a run length limited code sequence, comprising:

a generation unit for generating a plurality of different code sequences which have recording densities that gradually become higher; and

a recording unit for recording the plurality of different code sequences generated by the generation unit on a plurality of successive subfields in a test data field of an information storage medium;

wherein ~~the run length limited code generation apparatus is an apparatus for generating, recording, and reproducing~~ a (d, k) run length limited code sequence ~~which~~ meets a condition that a minimum run length of identical codes is (d+1)~~,~~ and a maximum run length of identical codes is (k+1), and

wherein, under the condition $d1 > d2 > \cdots > dL$, the generation unit generates a (d1, k1) run length limited code sequence, a (d2, k2) run length limited code sequence, and a (dL, kL) run length limited code sequence, and the recording unit records the (d1, k1) run length limited code sequence on a first subfield of the information storage medium, the (d2, k2) run

length limited code sequence on a second subfield of the information storage medium, and the (dL, kL) run length limited code sequence on an L-th subfield of the information storage medium.

8. (Currently Amended) ~~An apparatus according to claim 5,~~ A run length limited code recording/reproduction apparatus for generating, recording, and reproducing a run length limited code sequence, comprising:

a generation unit for generating a plurality of different code sequences which have recording densities that gradually become higher; and

a recording unit for recording the plurality of different code sequences generated by the generation unit on a plurality of successive subfields in a test data field of an information storage medium;

~~wherein~~ wherein, under the condition $P1 \leq P2 \leq \cdots \leq PL$ and $P1 < PL$, the generation unit generates a first run length limited code sequence that includes a minimum run length pattern with ~~a~~ an occurrence frequency P1 ~~of occurrence~~, a second run length limited code sequence that includes a minimum run length pattern with ~~a~~ an occurrence frequency P2 ~~of occurrence~~, and a third run length limited code sequence that includes a minimum run length pattern with ~~a~~ an occurrence frequency PL ~~of occurrence~~, and the recording unit records the first, second, and third run length limited code sequences in turn on a plurality of successive subfields in a test data field of an information storage medium.

9. (Currently Amended) An apparatus according to claim ~~5~~ 6, further comprising:

a reproduction unit for reproducing the plurality of subfields in turn; and

an adjustment unit for adjusting reproduction performance of the reproduction unit on the basis of reproduction results of the plurality of subfields.

10. (Canceled)

11. (Currently Amended) ~~A method according to claim 10, further~~ A run length limited code recording/reproduction method for generating, recording, and reproducing a run length limited code sequence, comprising:

generating ~~the plurality of different code sequences~~ a plurality of different code sequences, which have recording densities that gradually become higher, on the basis of a plurality of different run length limitations which gradually decrease a minimum run length of identical codes; and

recording the plurality of generated different code sequences on a plurality of successive subfields in a test data field of an information storage medium.

12. (Currently Amended) ~~A method according to claim 10,~~ A run length limited code recording/reproduction method for generating, recording, and reproducing a run length limited code sequence, comprising:

generating a plurality of different code sequences which have recording densities that gradually become higher; and

recording the plurality of generated different code sequences on a plurality of successive subfields in a test data field of an information storage medium;

wherein ~~the run length limited code generation method is a method for generating, recording, and reproducing~~ a (d, k) run length limited code sequence which meets a condition

that a minimum run length of identical codes is (d+1)~~,~~ and a maximum run length of identical codes is ~~(k+1), and~~ (k+1);

~~the method further comprises:~~

~~under the condition d1 > d2 > ··· > dL,~~

generating a (d1, k1) run length limited code sequence, a (d2, k2) run length limited code sequence, and a (dL, kL) run length limited code sequence; and

recording the (d1, k1) run length limited code sequence on a first subfield of the information storage medium, the (d2, k2) run length limited code sequence on a second subfield of the information storage medium, and the (dL, kL) run length limited code sequence on an L-th subfield of the information storage medium;

wherein d1 > d2 > ··· > dL.

13. (Currently Amended) ~~A method according to claim 10,~~ A run length limited code recording/reproduction method for generating, recording, and reproducing a run length limited code sequence, comprising:

generating a plurality of different code sequences which have recording densities that gradually become higher; and

recording the plurality of generated different code sequences on a plurality of successive subfields in a test data field of an information storage medium;

~~further comprising~~:

~~under the condition P1 ≤ P2 ≤ ··· ≤ PL and P1 < PL,~~

generating a run length limited code sequence that includes a minimum run length pattern with a an occurrence frequency P1 ~~of occurrence~~, a run length limited code sequence that includes a minimum run length pattern with ~~a~~ an occurrence frequency P2 ~~of occurrence~~,

and a run length limited code sequence that includes a minimum run length pattern with ~~a~~ an occurrence frequency PL ~~of occurrence~~; and

recording the first, second, and third run length limited code sequences in turn on a plurality of successive subfields in a test data field of an information storage medium;

wherein $P1 \leq P2 \leq \cdots \leq PL$ and $P1 < PL$.

14. (Currently Amended) A method according to claim ~~10~~ 11, further comprising:

reproducing the plurality of subfields; and

adjusting reproduction performance on the basis of reproduction results of the plurality of subfields.

15. (New) An apparatus according to claim 8, further comprising:

a reproduction unit for reproducing the plurality of subfields in turn; and

an adjustment unit for adjusting reproduction performance of the reproduction unit on the basis of reproduction results of the plurality of subfields.

16. (New) A method according to claim 13, further comprising:

reproducing the plurality of subfields; and

adjusting reproduction performance on the basis of reproduction results of the plurality of subfields.